

104TH CONGRESS
1ST SESSION

S. 1077

To authorize research, development, and demonstration of hydrogen as an energy carrier, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 26 (legislative day, JULY 10), 1995

Mr. HARKIN (for himself, Mr. AKAKA, Mr. BINGAMAN, Mr. INOUE, Mr. KYL, and Mr. REID) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To authorize research, development, and demonstration of hydrogen as an energy carrier, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Hydrogen Future Act
5 of 1995”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

8 (1) fossil fuels, the main energy source of the
9 present, have provided this country with tremendous
10 supply but are limited;

1 (2) additional research, development, and dem-
2 onstration are needed to encourage private sector in-
3 vestment in development of new and better energy
4 sources and enabling technologies;

5 (3) hydrogen holds tremendous promise as a
6 fuel because it can be extracted from water and can
7 be burned much more cleanly than conventional
8 fuels;

9 (4) hydrogen production efficiency is a major
10 technical barrier to society's collectively benefiting
11 from one of the great energy carriers of the future;

12 (5) an aggressive, results-oriented, multiyear re-
13 search initiative on efficient hydrogen fuel produc-
14 tion and use should be maintained; and

15 (6) the current Federal effort to develop hydro-
16 gen as a fuel is inadequate.

17 **SEC. 3. PURPOSES.**

18 The purposes of this Act are—

19 (1) to direct the Secretary of Energy to conduct
20 a research, development, and demonstration pro-
21 gram leading to the production, storage, transport,
22 and use of hydrogen for industrial, residential,
23 transportation, and utility applications; and

24 (2) to provide advice from academia and the
25 private sector in the implementation of the Depart-

1 ment of Energy’s hydrogen research, development,
2 and demonstration program to ensure that economic
3 benefits of the program accrue to the United States.

4 **SEC. 4. DEFINITIONS.**

5 In this Act:

6 (1) DEPARTMENT.—The term “Department”
7 means the Department of Energy.

8 (2) SECRETARY.—The term “Secretary” means
9 the Secretary of Energy.

10 **SEC. 5. RESEARCH AND DEVELOPMENT.**

11 (a) AUTHORIZED ACTIVITIES.—

12 (1) IN GENERAL.—Pursuant to this section, the
13 Spark M. Matsunaga Hydrogen Research, Develop-
14 ment, and Demonstration Act of 1990 (42 U.S.C.
15 12401 et seq.), and section 2026 of the Energy Pol-
16 icy Act of 1992 (42 U.S.C. 13436), and in accord-
17 ance with the purposes of this Act, the Secretary
18 shall conduct a hydrogen energy research, develop-
19 ment, and demonstration program relating to pro-
20 duction, storage, transportation, and use of hydro-
21 gen, with the goal of enabling the private sector to
22 demonstrate the feasibility of using hydrogen for in-
23 dustrial, residential, transportation, and utility ap-
24 plications.

1 (2) PRIORITIES.—In establishing priorities for
2 Federal funding under this section, the Secretary
3 shall survey private sector hydrogen activities and
4 take steps to ensure that activities under this section
5 do not displace or compete with the privately funded
6 hydrogen activities of the United States industry.

7 (b) SCHEDULE.—

8 (1) SOLICITATION.—Not later than 180 days
9 after the date of the enactment of an Act providing
10 appropriations for programs authorized by this Act,
11 the Secretary shall solicit proposals from all inter-
12 ested parties for research and development activities
13 authorized under this section.

14 (2) DEPARTMENT FACILITY.—The Secretary
15 may consider, on a competitive basis, a proposal
16 from a contractor that manages and operates a de-
17 partment facility under contract with the Depart-
18 ment, and the contractor may perform the work at
19 that facility or any other facility.

20 (3) AWARD.—Not later than 180 days after
21 proposals are submitted, if the Secretary identifies
22 one or more proposals that are worthy of Federal as-
23 sistance, the Secretary shall award financial assist-
24 ance under this section competitively, using peer re-

1 view of proposals with appropriate protection of pro-
2 prietary information.

3 (c) COST SHARING.—

4 (1) RESEARCH.—

5 (A) IN GENERAL.—Except as provided in
6 subparagraph (B), in the case of a research
7 proposal, the Secretary shall require a commit-
8 ment from non-Federal sources of at least 25
9 percent of the cost of the research.

10 (B) BASIC OR FUNDAMENTAL NATURE.—

11 The Secretary may reduce or eliminate the non-
12 Federal requirement under subparagraph (A) if
13 the Secretary determines that the research is
14 purely basic or fundamental.

15 (2) DEVELOPMENT AND DEMONSTRATION.—In
16 the case of a development or demonstration pro-
17 posal, the Secretary shall require a commitment
18 from non-Federal sources of at least 50 percent of
19 the cost of development or demonstration.

20 (d) CONSULTATION.—Before financial assistance is
21 provided under this section or the Spark M. Matsunaga
22 Hydrogen Research, Development, and Demonstration Act
23 of 1990 (42 U.S.C. 12401 et seq.)—

24 (1) the Secretary shall determine, in consulta-
25 tion with the United States Trade Representative

1 and the Secretary of Commerce, that the terms and
2 conditions under which financial assistance is pro-
3 vided are consistent with the Agreement on Sub-
4 sidies and Countervailing Measures referred to in
5 section 101(d)(12) of the Uruguay Round Agree-
6 ment Act (19 U.S.C. 3511(d)(12)); and

7 (2) an industry participant shall be required to
8 certify that—

9 (A) the participant has made reasonable
10 efforts to obtain non-Federal funding for the
11 entire cost of the project; and

12 (B) full non-Federal funding could not be
13 reasonably obtained.

14 (e) DUPLICATION OF PROGRAMS.—The Secretary
15 shall not carry out any activity under this section that un-
16 necessarily duplicates an activity carried out by another
17 government agency or the private sector.

18 **SEC. 6. TECHNOLOGY TRANSFER.**

19 (a) EXCHANGE.—The Secretary shall foster the ex-
20 change of generic, nonproprietary information and tech-
21 nology developed pursuant to section 5 among industry,
22 academia, and government agencies.

23 (b) ECONOMIC BENEFITS.—The Secretary shall en-
24 sure that economic benefits of the exchange of information
25 and technology will accrue to the United States economy.

1 **SEC. 7. REPORTS TO CONGRESS.**

2 (a) IN GENERAL.—Not later than 18 months after
3 the date of enactment of this Act, and annually thereafter,
4 the Secretary shall transmit to Congress a detailed report
5 on the status and progress of the Department's hydrogen
6 research and development program.

7 (b) CONTENTS.—A report under subsection (a) shall
8 include—

9 (1) an analysis of the effectiveness of the pro-
10 gram, to be prepared and submitted by the Hydro-
11 gen Technical Advisory Panel established under sec-
12 tion 108 of the Spark M. Matsunaga Hydrogen Re-
13 search, Development, and Demonstration Act of
14 1990 (42 U.S.C. 12407); and

15 (2) recommendations of the Panel for any im-
16 provements in the program that are if needed, in-
17 cluding recommendations for additional legislation.

18 (3) REPEAL OF UNNECESSARY PROVISION.—
19 The Spark M. Matsunaga Hydrogen Research, De-
20 velopment, and Demonstration Act of 1990 (42
21 U.S.C. 1401 et seq.) is amended—

22 (A) by striking section 103;

23 (B) by redesignating sections 104, 105,
24 106, 107, 108, and 109 as sections 103, 104,
25 105, 106, 107, and 108, respectively;

26 (C) in section 103 (as redesignated)—

1 (i) in subsection (a) by striking “,
 2 consistent with the 5-year comprehensive
 3 program management plan under section
 4 103,”; and

5 (ii) in subsection (e) by striking
 6 “106” and inserting “105”;

7 (D) in section 104(b) (as redesignated) by
 8 striking “104” and inserting “103”;

9 (E) in section 105(a) (as redesignated) by
 10 striking “108” and inserting “107”;

11 (F) in section 106(c) (as redesignated) by
 12 striking “108” and inserting “107”; and

13 (G) in section 107(d) (as redesignated)—

14 (i) by adding “and” at the end of
 15 paragraph (1);

16 (ii) by striking “; and” at the end of
 17 paragraph (2) and inserting a period; and

18 (iii) by striking paragraph (3).

19 **SEC. 8. COORDINATION AND CONSULTATION.**

20 (a) COORDINATION WITH OTHER FEDERAL AGEN-
 21 CIES.—The Secretary shall—

22 (1) coordinate all hydrogen research and devel-
 23 opment activities in the Department with the activi-
 24 ties of other Federal agencies, including the Depart-
 25 ment of Defense, the Department of Transportation,

1 and the National Aeronautics and Space Administra-
2 tion, that are engaged in similar research and devel-
3 opment; and

4 (2) pursue opportunities for cooperation with
5 those Federal entities.

6 (b) CONSULTATION.—The Secretary shall consult
7 with the Hydrogen Technical Advisory Panel established
8 under section 108 of the Spark M. Matsunaga Hydrogen
9 Research, development, and Demonstration Act of 1990
10 (42 U.S.C. 12407) as necessary in carrying out this Act.

11 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

12 (a) IN GENERAL.—There are authorized to be appro-
13 priated to carry out this Act—

14 (1) \$25,000,000 for fiscal year 1996;

15 (2) \$35,000,000 for fiscal year 1997; and

16 (3) \$40,000,000 for fiscal year 1998.

17 (b) LIMITATION ON AUTHORITY TO OBLIGATE
18 FUNDS.—

19 (1) LIMITATION.—In each of fiscal years 1996,
20 1997, and 1998, the total amount that may be obli-
21 gated for energy supply research and development
22 activities shall not exceed the total amount obligated
23 for such activities in fiscal year 1995.

1 (2) RULE OF CONSTRUCTION.—Paragraph (1)
2 shall not be construed as authorizing the appropria-
3 tion of any Federal funds.

